

In The Claims

Please amend the claims as follows:

What is claimed is:

1-27 (cancelled)

28. (new) A stereomicroscope comprising:

a binocular tube (1) ,

a microscope body (4) for passing two stereoscopic observation beam paths (3a, 3b),

a microscope holder (14) that is connected to a displaceable focus-adjusting mechanism (9), the focus-adjusting mechanism (9) in turn being fastened to a stand (13),

a beam splitter (2a) used to combine the two stereoscopic observation beam paths (3a, 3b) into a common beam path (3c), wherein the axes of the two observation beam paths (3a, 3b) entering into the binocular beam splitter (2a) and the axis of the beam path (3c) emerging from the binocular beam splitter (2a) are parallel to each other, and the axis of the emerging beam path (3c) is disposed at distance (Vs) from a symmetry axis of the two entering observation beam paths (3a, 3b),

a carrier (12) bearing the microscope body (4) and being displaceable obliquely relative to a displacement direction of the focus-adjusting mechanism (9) to compensate for said displacement (Vs),

a switching device (5) held on holder (14) and provided with mounts for at least one stereo lens (6) and at least one compound lens (7), wherein by actuating the switching device (5) the lenses (6, 7) can selectively be brought over an object (8) and both the stereo lens (6) and the compound lens (7) can be placed over the object (8) parfocally and parcentrally,

a gear (10) which, depending on the position of the switching device (5), automatically brings about the displacement of the carrier (12) to compensate for displacement (Vs),

wherein the binocular beam splitter (2a) is disposed between the carrier (12) and the compound lens (7).

29. (new) A stereomicroscope as claimed in claim 28 wherein an incident fluorescent light illumination system fitted with exciter and blocking filters (19a, 19b) is provided.

30. (new) A stereomicroscope, as defined in claim 28, configured as an incident light stereomicroscope further comprising:

a microscope body (4) comprising an incident light illumination system or a connection therefor,

a carrier (12) bearing the microscope body (4), the carrier being displaceable relative to the holder (14) across a displacement direction of the focus adjusting mechanism (9),

a system for coupling an illumination beam path (34) into the beam path (3c) emerging from the binocular beam splitter (2a),

wherein in the microscope body (4) there is provided besides the stereoscopic observation beam paths (3a, 3b) an illumination beam path (34) which is separated therefrom and is preferably parallel thereto and which when the stereo lens (6) is selected passes through said lens.

31. (new) A stereomicroscope as defined in claim 28 wherein the binocular beam splitter (2a) is disposed between the carrier (12) and the compound lens (7).

32. (new) A stereomicroscope as defined in claim 28 wherein a displacement range of the carrier (12) corresponding to the displacement (V_s) comprises path components corresponding to displacement components (V_{sx} , V_{sy}) in at least two directions (X/Y) of a plane.

33. (new) A stereomicroscope as defined in claim 28 wherein the displacement range of the carrier (12) corresponds to a displacement range of the microscope body (4) such that the two stereoscopic observation beam paths (3a, 3b) can selectively

- a) pass through the stereo lens (6) or
- b) coincide with the inlet axes of the binocular beam splitter (2a).

34. (new) A stereomicroscope as defined in claim 28 wherein the axes of the observation beam paths 3a, 3b and the axis of the stereo lens (6) are parallel, and the axes of the observation beam paths 3a, 3b are mirror symmetrical to each other with respect to a plane in which also lies the axis of the stereo lens (6).

35. (new) A stereomicroscope as defined in claim 33 wherein a) the axes of the stereoscopic observation beam paths (3a, 3b) and the axis of the stereo lens (6) do not lie in a common plane.

36. (new) A stereomicroscope as defined in claim 28 wherein the switching device (5) is configured as a rotatable turret or as a slider, the direction of movement of which is essentially parallel to a common plane of the two observation beam paths (3a, 3b).

37. (new) A stereomicroscope as defined in claim 28 wherein the holder (14), the gear (10), the displaceable carrier (12) and the switching device (5) form with the lens mounts and the binocular beam splitter (2a), a single unit which selectively can be connected to or detached from the microscope body (4).

38. (new) A stereomicroscope as defined in claim 1 wherein the holder (14), the gear (10), the displaceable carrier (12) and the switching device (5) form with the lens mounts and the binocular beam splitter (2a) and the illumination coupling-in device, a single unit which selectively can be connected to or detached from the microscope body (4).

39. (new) A stereomicroscope as defined in claim 28, wherein the compound lens (7) from a group of such lenses can be selectively and interchangeably connected with the one of the switching device (5), the binocular beam splitter (2a), and the illumination coupling-in device (15).

40. (new) Stereomicroscope as defined in claim 28, wherein the mount for the compound lens (7) comprises a fine focusing system (11).

41. (new) A stereomicroscope as defined in claim 28, wherein at least one of the mounts comprises an adjustable system for adjusting the lens (7) preferably in a direction across the lens axis.

42. (new) A stereomicroscope as defined in claim 28, wherein the stereo lens (6) can be selected from a group of stereo lenses or switched with a lens from such a group.

43. (new) A stereomicroscope as defined in claim 28, wherein the switching device (5) can be rotated through an angle of 360 degrees and preferably is provided with latches.

44. (new) A stereomicroscope as defined in claim 28 wherein the holder (14) is L shaped, the short part of the "L" being fastened to the focus adjusting mechanism (9).

45. (new) A stereomicroscope as defined in claim 28 wherein it comprises an incident light illumination system where the illumination beam path passes coaxially through one or both of the two stereoscopic observation beam paths (3a, 3b) in the microscope body (4).

46. (new) A stereomicroscope as defined in claim 45 wherein the illumination system comprises a incident fluorescent light illumination system with exciter and blocking filters (19a, 19b).

47. (new) A stereomicroscope as defined in claim 28, wherein the device for illumination in-coupling (15) comprises a mirror (42) and/or a beam splitter (43) disposed between the binocular beam splitter (2a) and the compound lens (7).

48. (new) A stereomicroscope as defined in claim 47, wherein the device for illumination in-coupling (15) comprises an adjustable mirror (42).

49. (new) A stereomicroscope as defined in claim 47 wherein the beam splitter (43) is configured as a neutral tint beam splitter.

50. (new) A stereomicroscope as defined in claim 47 wherein the beam splitter (43) is configured as a dichroic beam splitter.

51. (new) A stereomicroscope as defined in claim 28 wherein the beam splitter (43) is adapted to the filter properties of the exciter and blocking filters (19a, 19b) and can be selected from a group of beam splitters or switched with a beam splitter from such a group.

52. (new) A stereomicroscope as defined in claim 28, wherein the beam splitter (43) is configured as a flat component with main boundary surfaces extending parallel to the beam splitter surface.

53. (new) A stereomicroscope as defined in claim 28, wherein the beam splitter (2a) is a Y prism (2b).

54. (new) A stereomicroscope as defined in claim 28 wherein the beam splitter (2a) is a Y prism (2b) and that the carrier (12) and the gear (10) permit the microscope body (4) to be displaced exclusively in a single spatial direction (Y) for the purpose of introducing a displacement (V_{sy}) of the stereo lens (6) in this spatial direction (Y).

55. (new) A stereomicroscope as defined in claim 54, wherein the displacement range of the carrier (12) corresponds to a displacement range of the microscope body (4) such that both stereoscopic observation beam paths (3a, 3b) pass through the stereo lens (6) paracentrally to the compound lens, wherein the axes of the observation beam paths 3a, 3b and the axis of the stereo lens (6) are parallel, and the axes of the observation beam paths 3a, 3b are mirror symmetrical with each other with respect to a plane in which also lies the axis of the stereo lens (6).

56. (new) A stereomicroscope as defined in claim 28, wherein it is equipped as a surgical microscope without lens carrier and that for the switching device 5 a remotely controllable electric drive is provided to bring about remotely controlled switching between the two lenses (6,7).

57. (new) A stereomicroscope as defined in claim 28, wherein the gear (10) comprises at least one gear wheel (23a, 23b) and one gear rack (24) or a crank mechanism (35) with a cam (36) which are disposed or configured so that during a displacement they bring about a misalignment (V_s) with misalignment components (V_{sx} , V_{sy}) in two spatial directions of a plane.

58. (new) An element for a stereomicroscope, according to claim 28 comprising a microscope holder (14), a gear (10), a carrier (12) for a microscope body that can be displaced relative to the holder (14) and a switching device (5) supported on the holder (14) and provided with lens mounts for at least one stereo lens (6) and at least one compound lens (7), as well as with a binocular beam splitter (2a), wherein all said components form a single unit which can selectively be connected with or detached from a focus adjusting mechanism (9) of a stand (13) and a microscope body (4).